

MEMORANDUM

DATE: February 8, 2010

TO: Mike Amling, Principal in Charge

FROM: Stan Spencer, Senior Biologist

SUBJECT: Fairy Shrimp Habitat Suitability Assessment for I-5 High-Occupancy Vehicle Lane Extension Project (LSA Project No. RMN0901)

Two sensitive fairy shrimp species are known to occur in Orange County (County): Riverside fairy shrimp (*Streptocephalus woottoni*) and San Diego fairy shrimp (*Branchinecta sandiegoensis*). A common (non special-status) species, versatile fairy shrimp (*Branchinecta lindahli*), also occurs in the County. These species inhabit nonmarine, nonflowing, temporary waters that persist for at least 10 days.

On December 14 and 15, 2009, LSA Associates, Inc. Senior Biologist Stan Spencer conducted a site visit to assess habitat suitability for sensitive fairy shrimp species within the biological study area (BSA) for the Interstate 5 (I-5) High-Occupancy Vehicle (HOV) Lane Extension Project (Figure 1; all figures attached). The area had received approximately 1 inch of rain on December 11 and 12. All areas of the BSA were visually assessed for ponded areas potentially inhabitable by fairy shrimp, as well as for any other depressions with vegetation or surface features indicative of the potential for the required ponding.

Only one area that appeared to be potentially suitable for San Diego fairy shrimp was found (Figure 2). At the time of the initial site visit, the pool was nearly 400 feet (ft) long, running parallel to and between Camino Capistrano and the railroad tracks. The pool was still inundated at the time of a return visit on January 28, 2010. The pool is fed by direct precipitation and runoff from the immediately surrounding area. It may also receive runoff from culverts under Camino Capistrano. The sources of runoff feeding these culverts were not apparent at the time of the site visits. There was no suitable habitat for Riverside fairy shrimp found in the BSA.

If project construction would occur anywhere between the existing pavement of Camino Capistrano and the railroad tracks from approximately 500 ft south to 800 ft north of the marked pool location (Figure 2), a focused fairy shrimp survey may be required to determine presence or absence of sensitive fairy shrimp species. A complete fairy shrimp survey consists of two wet season surveys (i.e., 2 years) or a wet season survey and a dry season survey. In order to comply with the United States Fish and Wildlife Service (USFWS) protocol, a wet season survey must begin within 2 weeks of the time pools first fill, although exceptions to this requirement may be authorized by the USFWS under certain conditions. Authorization from the USFWS is required before a survey can begin.

Alternatively, presence could be assumed. If construction is anticipated in this area, it is recommended that the USFWS be consulted to determine the appropriate buffer distance for avoidance of impacts to potential fairy shrimp habitat. A buffer as small as 50 or 100 ft north and south of the maximum pool area may be sufficient. Best management practices (BMPs) should also

be followed to ensure that construction does not result in negative impacts to the quality of water entering the pool through the culverts.

If no project construction occurs between the existing pavement of Camino Capistrano and the railroad tracks from approximately 500 ft south to 800 ft north of the marked pool location (Figure 2), no focused survey is needed, and avoidance measures and water quality BMPs will be sufficient to prevent impacts to special-status fairy shrimp and their potential habitat.

Attachments: Figures 1 and 2

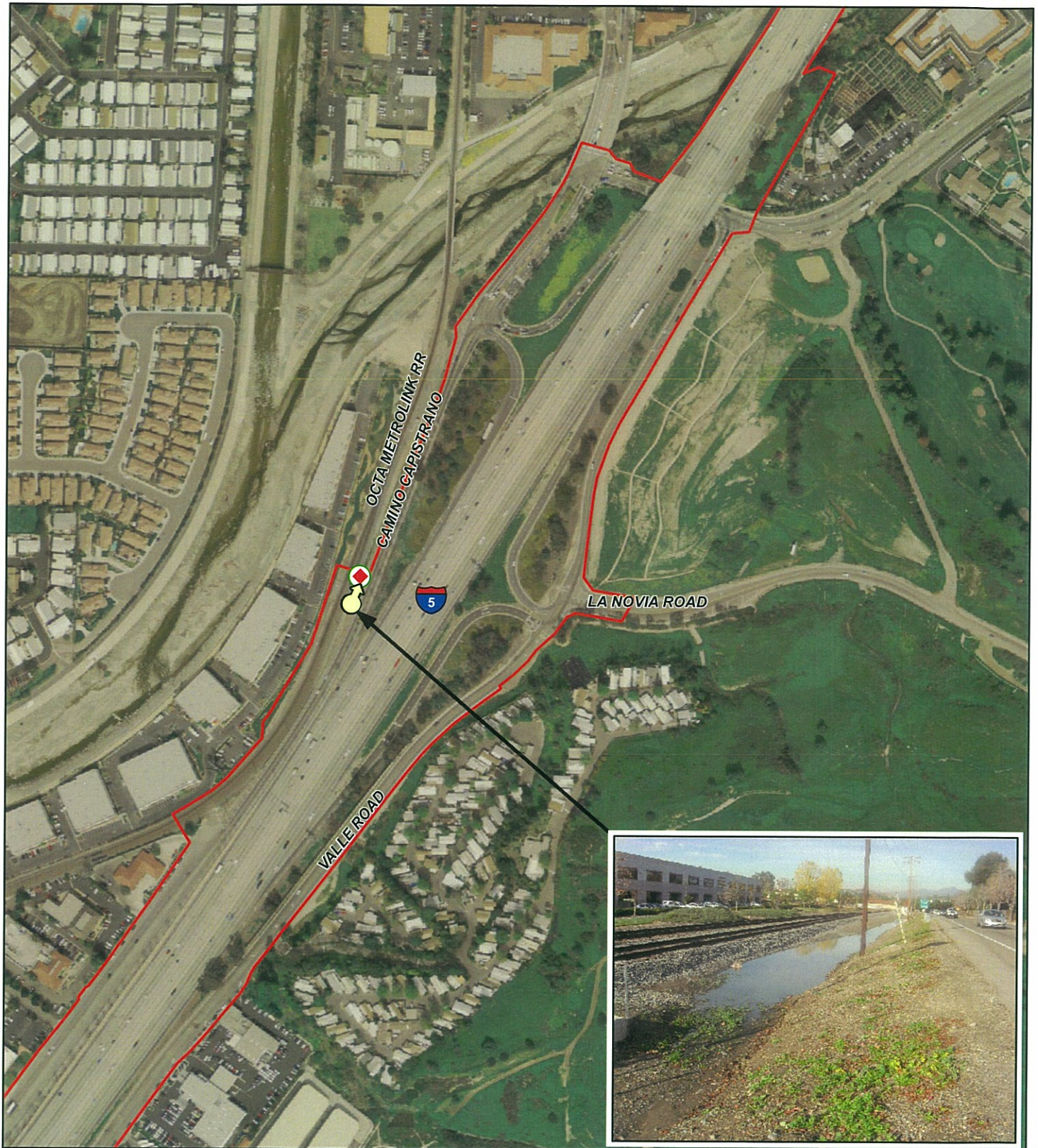
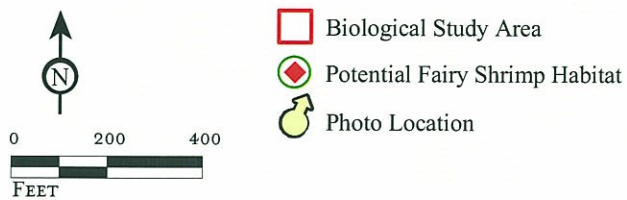


FIGURE 2



I-5 HOV Lane Extension Project
Potential Fairy Shrimp Habitat

12-ORA-005 PM 3.30/8.70
 12840-0F960K
 EA# OF9600

SOURCE: AirPhotoUSA, 2008; Thomas Bros., 2009

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